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The Federal Base Network

The Federal Base Network (FBN) is a very high-accuracy network of permanently marked control points at approximately 1-degree-by-1-degree (75- to 125-km) spacing throughout the United States and its territories. FBN contains additional stations as needed for safe aircraft navigation and in areas of crustal motion. FBN provides spatial reference control having some of the highest accuracies available today. Defining and managing FBN is one of NGS' primary responsibilities.

The FBN is designed to supply accuracies of at least:

- geodetic latitudes and longitudes at 2 cm (95% confidence level),
- ellipsoidal and orthometric heights at 1 mm/km relative accuracy,
- gravity at 50 microgals accuracy, and
- horizontal and vertical crustal motion at 1 mm/year relative accuracy.

NGS is conducting observations to complete the ellipsoidal and orthometric height components of FBN in order to attain coordinate accuracies of 2 centimeters in three dimensions (95% confidence level). This task is expected to be completed in 2002.

For information, contact:

NGS Spatial Reference System Division, Attn: Mr. Edward J. McKay
 Telephone: 301-713-3191; Fax: 301-713-4324
 Email: Ed.Mckay@noaa.gov
 NGS Web site: www.ngs.noaa.gov

U.S. DEPARTMENT OF COMMERCE
 National Oceanic and Atmospheric Administration
 National Ocean Service
 National Geodetic Survey

The National Geodetic Survey (NGS) defines and manages the National Spatial Reference System, which determines position, height, distance, direction, gravity, and shoreline throughout the United States. Since 1807 NGS and its predecessor agencies have led the world in precise positioning and developed emerging technologies for the public. NGS provides its expertise and a wealth of free information, including direct access to its data base, on the World Wide Web at: www.ngs.noaa.gov

FOR INFORMATION CONTACT:

Information Services:
 National Geodetic Survey
 1315 East-West Highway
 Room 9202
 Silver Spring, MD 20910-3282
 Phone: 301-713-3242
 Fax: 301-713-4172
 Mon.-Fri.: 8:00 am- 4:30 pm, ET
 Email: info_center@ngs.noaa.gov

Aerial Photographs:
 Joan Rikon
 Phone: 301-713-2692
 Email: Joan.Rikon@noaa.gov

Training Workshops:
 Edward McKay
 Phone: 301-713-3191
 Fax: 301-713-4324
 Email: Ed.Mckay@noaa.gov
 - or -
 David Doyle
 Phone: 301-713-3178
 Fax: 301-713-4327
 Email: Dave.Doyle@noaa.gov

State Advisor Program:
 Gilbert Mitchell
 Phone: 301-713-3228
 Fax: 301-713-4176
 Email: Gilbert.Mitchell@noaa.gov

Calibration Base Lines:
 National Geodetic Survey
 Instrumentation and
 Methodology Branch
 P.O. Box 190
 Corbin, VA 22446-0190
 Phone: 540-373-1243
 Fax: 540-373-4327

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